**Matthew S. Marzilli**
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Department of Computer Science Undergraduate Student
University of Massachusetts Amherst
Amherst, MA 01003

## Goal

Research and develop real-world computer applications that benefit the world. I am especially interested in High Performance Computing, Scientific Computing, and Software Engineering.

## Education

Planned B.S., Computer Science, Planned B.A., Physics
University of Massachusetts Amherst, Spring 2007
Current Status: Senior Undergraduate with **GPA**: (3.9 / 4.0)

## Programming

Languages: C, C++, Java, Python, Perl, Lisp, Scheme, IBM Cell Assembly, x86 Assembly
Environments: UNIX, Eclipse, MS Visual Studio, CVS, MATLAB, GNU Octave, Emacs

## Research Positions with Related References

**Research Intern, Massachusetts Institute of Technology Lincoln Laboratory May - August 2006**
*Advisor*: Jeremy Kepner *Project Keywords*: Architecture, Signal Processing, Software Engineering, Systems

Developed an embedded software interface between High Performance signal processing applications written for the IBM Cell Microprocessor and the MATLAB programming environment. Programming done in C/C++/Cell Machine Code/MATLAB. Interface allows scientists and engineers to harness the power of the Cell processor from MATLAB. Programmers can also verify their application's output and measure performance.

*Related Reference: Exploring the Cell with HPEC Challenge Benchmarks, S. Sacco, J. Kepner, G. Schrader, M. Marzilli, HPEC Workshop, 2006, Sep 19-21, Lexington, MA*

**Research Student, LASER Laboratory for Advanced Software Engineering Research, University of Massachusetts Amherst Computer Science Department, May 2005 – Present**
*Advisors*: Lori Clarke, Leon Osterweil *Project Keywords*: Software Engineering, User Interfaces, Web Apps

Planned Undergraduate Thesis Project. Developing middleware to control the user functionality of a Guided User Interface (GUI) from the software process specification language Little-JIL. Using this technology to develoe an Online Dispute Resolution (ODR) web application allowing asynchronous grievance mediation for the National Mediation Board. Programming in Java with web languages HTML, Javascript, XML, Tapestry.

*Related Reference: A process-driven tool to support online dispute resolution, L. Clarke, A. Gaitenby, D. Gyllstrom, E. Katsh, M. Marzilli, L. J. Osterweil, N. K. Sondheimer, L. Wing, A. Wise, D. Rainey, Proceedings of the 2006 international conference on Digital government research, San Diego, California, 356 – 357, 2006*

**Research Student, University of Massachusetts Amherst Physics and Polymer Science Departments, May 2005 – September 2005**
*Advisor*: Narayanan Menon *Project Keywords*: Mechanical Physics, Polymer Science, Data Analysis

Studied the mechanical properties of nanometer thin polymer materials by examining how they react when crumpled, or force folded into a smaller area. Characterized a variety of the film's surface characteristics and setup procedures for future study.

## Awards and Honors

**Goldwater Scholarship – Awarded Spring 2006**

One of 10 computer science majors in the United States to receive award. Recipients selected on the basis of academic merit from a field of 1,081 mathematics, science, and engineering students who were nominated by the faculties of colleges and universities nationwide.

http://www.act.org/goldwater/

**Member of Phi Kappa Phi**

**Deans List Academic Honors Each Semester since Fall 2002**

**Strong Course Work in Computational Linguistics and Natural Language Processing**

## Refrences

Dr. Jeremy Kepner
jkepner@ll.mit.edu
(781) 981-5500
Senior Technical Staff at MIT Lincoln Laboratory, Embedded Digital Systems Group

Professor Lori Clarke
clarke@cs.umass.edu
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Professor Leon Osterweil
ljo@cs.umass.edu
Co-directors of Laboratory for Advanced Software Engineering Research, UMAS Amherst

Professor Narayanan Menon
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(413) 545-0852
Independent Study in Physics Advisor